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10/577,670

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EXAMINER

DEAN, JR, JOSEPH E

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/577,670 | Applicant(s) CHEN ET AL. | |
| | Examiner JOSEPH DEAN, JR | Art Unit 2617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant amended claim 14 and 22. Previous amendment canceled claims 1-11.
2. Status of claims:

Claims 12-22 are pending.
3. Amended claims 14 and 22 have been accepted. Therefore the objection in claim 14, replacing leans with learns and in 101 rejection, adding non-transitory language to claim 22, both have been withdrawn.

Response to Arguments

4. Applicant's arguments filed 6/21/10 have been fully considered but they are not persuasive. The rejection of Cromer et al. (US20030156558) (hereinafter Cromer) and Raji US20040219878 addresses claimed subject matter, therefore claims 1-14 will remain rejected as described below.
5. The applicant argues that combination of Cromer and Raji does not teach "learning...about a requirement for the path information that was initiated at the radio access point; and initiating at the terminal radio station a method for determining path between the terminal radio station and the radio access point to fulfill the requirement initiated by the radio access point", the combination does not teach requirement for the path information triggering of a search for a path.
6. Applicant argues that in claim 21 and 22, Cromer does not teach initiating a method to determine a new path between first radio station and the radio access point following reception of the failure information.

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7. In response, the examiner respectfully disagrees. Claim 1 discloses "learning...about a requirement for the path information that was initiated at the radio access point, paragraph 0060 states, that a source wireless device or a proximate wireless device may broadcast data to other wireless devices in order for remote device to receive the data. The remote device responds to the wireless devices and eventually data is received by source or proximate device, therefore the remote device is informing source or proximate device of the number of paths, learning has to be considered here because the source or proximate device did not know about paths until remote wireless device learned of paths and responded. Also, claim 1 discloses," initiating at the terminal radio station a method for determining a path between the terminal radio station and the radio access point to fulfill the requirement initiated by the radio access point, again paragraph 0060, the remote wireless device is responding to broadcast that was initiated through wireless devices through source or proximate device, where the response includes identifying a number of paths for communication or to enlighten the source or proximate device about number of paths. Therefore, responding to broadcast from several devices which are received by the source or proximate device, making devices aware of the available paths which trigger communication between remote device and source or proximate device. If remote wireless device does not respond to the broadcast, no communication will take place between the remote wireless device and source or proximate device.

8. In response to claim 21 and 22, examiner respectfully disagrees. In claim 21, "means for initiating a method to determine a new path between first radio station and

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the radio access point following reception of the failure information”, per paragraph 77, Cromer’s reference, determining a new path is or could be by first seeing if existing path is available, if no path is available, system starts to search for a new path following a failure information, this entire process can be considered after failure information (also refer to claim 7 of Cromer). Therefore Cromer’s reference satisfies the recited claim limitation in claim 21 and 22.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cromer et al. (US20030156558) (hereinafter Cromer) and Raji US20040219878.

Per claim 12, Cromer discloses a method for operating a radio communication system with a radio access point and a plurality of radio stations including a terminal radio station located outside of direct radio transmission range of the radio access point (0021), the radio access point requiring path information about a path formed of at least one further radio station of the plurality of radio stations usable for *message* transfer between the radio access point and the terminal radio station (paragraph 0021, **i.e. remote mobile unit**), but fails to explicitly learning, at the terminal radio station about a requirement for the path information that was initiated at the radio access point, and initiating at the terminal radio station a method for determining a path between the

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terminal radio station and the radio access point to fulfill the requirement initiated by the radio access point.

However, Raji discloses learning at the terminal radio station about a requirement for the path information that was initiated at the radio access point (paragraph 0060, **i.e. responding by informing computing systems of possible paths**), initiating at the terminal radio station a method for determining a path between the terminal radio station and the radio access point to fulfill the requirement initiated by the radio access point (paragraph 0060, **i.e. informing proximate wireless system or source wireless device about possible paths that may have initiated broadcast process**)

Therefore, one skilled in the art would have found it obvious from the combined teachings of **Cromer**, which provides packet transfer between mobile unit outside AP range and **Raji**, which provides possible paths from terminal station to intermediate or source station, as a whole to produce the invention as claimed with a reasonable expectation of achieving a connection to mobile units outside a cell range and learning of new paths to the source node

Per claim 13, Combination discloses the method as claimed in claim 12, Cromer discloses wherein the radio communication system includes a base station located inside the direct radio transmission range of the radio access point and the terminal radio station is located within a radio coverage area of the base station (paragraph 0021, 0057 and 0058, Fig 3), wherein said method further comprises notifying the base

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station by the radio access point about the requirement for the path information (paragraph 0029), and wherein said learning by the terminal radio station about the requirement for the path information is a result of a notification by the base station (paragraph 0079, **i.e. transmit a probe response**).

Per claim 14, The combination discloses the method as claimed in claim 12, Cromer discloses wherein a known path between the terminal radio station and the radio access point formed of at least one further radio station is known to the terminal radio station and the radio access point (paragraph 0058), enabling data to be transferred from the terminal radio station to the radio access point and from the radio access point to the terminal radio station via the path (paragraph 0032-0039 and 0058) wherein said method further comprises receiving, at the radio access point, failure information about failure of the known path from a radio station of the path (paragraph 0058); initiating, at the terminal radio station, a method for determining a new path between the terminal radio station and the radio access point (paragraph 0058) but fails to disclose learning at the terminal radio station about the failure of the known path after the radio access point learns about the failure.

However, Raji discloses learning at the terminal radio station about the failure of the known path after the radio access point learns about the failure (paragraph 0073).

Therefore, one skilled in the art would have found it obvious from the combined teachings of **Croome**, which provides packet transfer between mobile unit outside AP range and **Raji**, which provides knowledge of dropped and created paths via

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source/intermediate nodes, as a whole to produce the invention as claimed with a reasonable expectation of achieving process of dropping and developing new paths for continued communication.

Per claim 15, the combination discloses the method as claimed in claim 14, wherein Cromer discloses said learning about the failure of the known path at the radio access point results from information received in response to sending data from the radio access point to the terminal radio station (paragraph 0077).

Per claim 16, the combination discloses the method as claimed in claim 15, wherein Cromer discloses said method further comprises sending test data for the radio access point from the terminal radio station to determine whether the failure exists in the known path (paragraph 0077, **i.e. next path stored within the first data structure is attempted to correct problem**).

Per claim 17, the combination discloses the method as claimed in claim 16, wherein Cromer discloses said sending of the test data takes place at regular time intervals (paragraphs 0078-0080 and 0090).

Per claim 18, the combination discloses the method as claimed in claim 16, wherein Cromer said learning about the failure of the known path at the terminal radio station results from said sending of the test data to determine whether the failure exists in the known path (paragraph 0077).

Per claim 19, the combination discloses the method as claimed in claim 18, wherein Cromer discloses said sending of the test data by the terminal radio station to determine whether the failure exists in the known path results from at least one

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notification sent as a result of a preceding determination of the known path (paragraph 0113).

Per claim 20, refer to same rationale as explained in claim 12 (multiple nodes can broadcast information as well as listen for notifications when terminal is turned on).

11. Claims 21 and 22 are rejected under 35 U.S.C. 102(a) as being anticipated by Cromer et al. (US20030156558) (hereinafter Cromer).

Per claim 21, Cromer discloses a first radio station for a radio the radio communication system formed of a radio access point and at least one second radio station in addition to the first radio station, the first radio station comprising: means for storing a path between said first radio station and the radio access point (paragraph 0064), where the path is formed of at least one of the second radio stations and is used for transferring information from said first radio station to the radio access point and from the radio access point to said first radio station via the path (paragraphs 0058 and 0064); means for sending test data for the radio access point to determine whether a failure of the path exists (paragraphs 0076 and 0077); means for receiving and processing failure information about presence of a failure of the stored path (paragraph 0077); and means for initiating a method to determine a new path between said first radio station and the radio access point following reception of the failure information (paragraph 0077, Fig 5, **i.e. method of switching to previously stored path, when no path stored, system starts to search for new path by building data structures until**

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AP is in range, therefore options are given to determine or initiate a method to determine path if failure occurs. (Also refer to claim 7 of the reference)).

Per claim 22, refer to same rationale as explained in claim 21.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH DEAN, JR whose telephone number is (571)270-7116. The examiner can normally be reached on Monday through Friday 7:30am to 5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bost Dwayne can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOSEPH DEAN, JR/
Examiner, Art Unit 2617

/PIERRE-LOUIS DESIR/
Examiner, Art Unit 2617